

McClintock (as)

ANNUAL LECTURE.

INTRODUCTORY LECTURE

TO THE

WINTER COURSE OF ANATOMY,

IN THE

PHILADELPHIA SCHOOL OF ANATOMY,

Delivered on Monday Evening, November 2d, 1840,

BY

JAMES MCCLINTOCK, M. D.

LECTURER ON ANATOMY AND SURGERY,

ONE OF THE PHYSICIANS TO THE PHILADELPHIA HOSPITAL, &c.

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Philadelphia, November 16th, 1840.

JAMES MCCLINTOCK, M. D.

DEAR SIR,

At a meeting of the Class of the PHILADELPHIA SCHOOL OF ANATOMY, held in your Anatomical Theatre, this evening, Mr. JAMES LOCKE, of Penn'a. was called to the Chair, and the undersigned appointed a Committee, to request from you a copy of your late INTRODUCTORY LECTURE for publication.

In communicating to you the wish of the Class, we take the opportunity of expressing our own, and their opinion, of the merits of your Address, that while we were gratified in listening to the impressive appeals to our understanding, of the necessity of diligence, and to the instruction conveyed, we were at the same time stimulated to exertion, by the rewards which were held out, and the honors to be acquired. It would refresh and renew in our minds the strong impressions thus made, if we had the opportunity of reading over the Lecture then delivered, and studying it with the care it deserves.

We therefore respectfully communicate to you our joint wishes, and hope that we shall be favoured by your compliance.

We have the honor to be,

Respectfully,

Your Ob't. Serv'ts.

JNO. J. INGRAM, S. C.
HOLLOWELL OLD, N. C.
HARRISON HOLT, Mass.
JACOB BOWMAN, Penn'a.
JOHN G. THOMPSON, "

Philadelphia, November 18th, 1840.

To Messrs. JNO. J. INGRAM, HOLLOWELL OLD, JACOB BOWMAN, HARRISON HOLT, and JOHN G. THOMPSON.

GENTLEMEN,

Your note of the 16th Inst. was duly received, and in accordance with the request therein made, I herewith furnish a copy of my Introductory Lecture for publication.

In thus complying with the wish of the Class, as expressed by you, I sincerely hope that its publication may have the effect intended by its delivery, viz. the convincing the Medical Student of the indispensable necessity of a correct and thorough knowledge of Anatomy.

Please accept for yourselves, Gentlemen, and the Class you represent, the best feelings and wishes of

Your Friend,

JAMES MCCLINTOCK.

INTRODUCTORY LECTURE.

GENTLEMEN,

In compliance with the custom which binds the lecturer upon any branch of science or literature, to introduce his subject and himself to the attention and good will of his auditors, I appear before you, on this occasion, to deliver the Introductory to my Winter Course of Lectures on Anatomy. As the flourish of trumpets upon the stage awakens the audience to attention, and excites their expectation of the coming spectacle, so the Introductory of the lecturer is designed as a sort of prologue, as well as antepast of his teachings. It is his intellectual bill of fare; and as the bill of fare, in all propriety, should not exaggerate the excellencies of the entertainment, neither should the Introductory lecture abound in promises. The general scope of such an address should be, 1st, The nature and importance of the subject treated of; 2d, a brief exposition of the manner of treating it; and 3d, an exhortation to its faithful and diligent study. These, then, gentlemen, are my present topics, and before I enter upon them, I may ask your indulgence of a single remark in regard to myself, and my position before you. You are here voluntarily,—there can be no other inducement for your presence than the desire of improvement,—for these are no University Halls,—the results of your studies here will be no College honors. I do not stand before you with a Professor's claims, nor are my instructions endorsed with the authority of chartered privileges, or clothed with the dignity of legislative sanctions. Although very necessary that you possess the knowledge, to be here acquired, it is not essential to your obtaining a degree in Medicine, that you come here night after night, to listen to a lecture, observe a demonstration, or handle the dissecting knife; you are here of your own free will, and I stand before you on my own responsibility. But I think it hardly necessary to appeal to your kindly feelings, in view of the relation that I sustain to you. In this country, of all others, there should be free and unobstructed openings for all teachers of scientific truth, whether private or public; the entire spirit of our republican institutions, the general tone of the public mind and feeling, the universal determination that every individual in the land may carve out his own path and build up a highway for himself, if he can, to wealth, to fame, or to usefulness, all forbid that in such an effort as the present, I should be unsuccessful from a want of good feeling, or of encouragement on your part. No, gentlemen, the recollection of my last year's course, when this lecture room was almost nightly filled with attentive auditors, and these dissecting rooms were thronged by diligent and persevering students, assures me, as does your presence on this occasion, that if the present effort to establish a private School of Anatomy, of an elevated class, should finally fail, it will not be for want of Students, but for want

of capacity or fidelity on the part of the Lecturer. But if an untiring zeal for the cause of medical science, an unwavering determination to use every effort for its advancement, a persevering devotion to the study of Human Anatomy, and a steadfast and laborious diligence in performing the duties of these rooms, can atone for any want of capacity on my part, and insure success, my enterprise will succeed. I throw myself, then, freely and unreservedly upon my own efforts, and upon your good will, believing firmly that if the former are steadfast and unremitting, the latter will be manly, generous and changeless.

With these remarks, I shall proceed to a brief view of the nature and importance of the subject to the study of which you are here invited. The value of anatomical knowledge is a theme which has been so often and so ably handled, that I should have sought some other topic for this address, did not a sense of duty point out the course to be pursued, and assure me that the desire of novelty should give place to the wish to enforce important and necessary truths. But, to many of you, the arguments by which the position is sustained, that anatomy is the basis of medical science, while it is one of the most interesting and absorbing of all sciences, will have all the advantage and interest of novelty; for although the experienced surgeon knows that nothing else but an accurate knowledge of anatomy will give clearness to his mind and steadiness to his hand, in the always interesting and anxious hour, when he is called upon to perform some important operation; although the learned physiologist is thoroughly aware that his beautiful science would be a tissue of empty theories, uncertain fancies, and vague hypothesis, if it were disconnected from Anatomy: and though the experienced physician may be well convinced of the great importance of correct anatomical knowledge even to the ordinary details of his practice: it is not to be supposed that you have yet given sufficient attention to these subjects to have any more than general ideas of the value and importance of the study of anatomy to every medical man. With these views, I am sure that you will not consider a brief examination of the point in question to be any encroachment upon your time and attention on this occasion; and if the impression be only made deeply and strongly upon your minds, that without a complete and thorough knowledge of anatomy you can never become eminently or even tolerably skilful in the useful and honorable profession to which you are aspiring, the object of my remarks will be fully accomplished.

Medicine, taken in its widest sense, embraces an extensive range of sciences, a tolerable acquaintance with all of which, is essential to a proper preparation for that noble profession, which is second to none in point of interest and importance, unless, it may be, the elevated employment of those men who are sent by the Great Physician, to point out the way to cure the moral maladies of our race. It not only requires a knowledge of the formation and functions of the human frame, but also of the numerous relations of external agents to the animal economy, their adaptation to the support and preservation of life, and their tendency, under peculiar circumstances, either to produce or to remove the diseases to which the human body is subject. We find, accordingly, that a knowledge of

Medicine implies an acquaintance with Anatomy; Physiology or the science of life; Pathology, or the investigation of the effects of disease upon the body; Surgery, at once a science and an art; Obstetrics, that most delicate branch of our profession, in which the life of both mother and offspring are often jeopardized by unforeseen accidents; and I am sorry to say, in many instances by the culpable ignorance of the practitioner. *Materia Medica*, or a knowledge of the various medicinal substances, animal, vegetable and mineral, with their natural characters and properties, as well as their application to practice; and Chemistry, which, by unfolding the laws of the combinations of matter, as far as those laws are discovered, not only throws light upon the nature of remedial agents, but also develops many principles and powers of the earth on which we dwell, and the atmosphere which we breathe, whose influence on the body of man, whether in health or disease, is almost incalculable. Over this wide field the student must not travel hastily, but with the careful, untiring diligence of an explorer; and with every one of these branches of knowledge he must obtain at least a tolerable acquaintance, before he can honorably offer himself to his fellow-men as qualified to take the charge of their health and their lives. But it has never been supposed that all of these branches are equally useful or important to the physician, or that the same degree of attention is due to each of them from the student; and it is very certain that some of them may be mastered with far less expenditure of toil and study than others. If any one of them deserves to be called more important than all the others, it is Anatomy; and without doubt, this department is more strictly and properly a *science*; more interesting in itself and in its relative bearing upon other branches of knowledge; more fully calculated to train and discipline the mind of the student to quick perception and acute observation; and in a word, more completely essential to the formation of those habits of thought, and that character of close and studious investigation, which are so invaluable to the medical practitioner, than any of them. Anatomy is the basis of the pyramid of medicine,—and according to the strength and extent with which this only sure foundation is laid, will be the firmness and durability of the superstructure. He that erects the fabric of a medical practice upon any other basis, “builds his house upon the sands,” and although the arts of a bold and shameless empiricism may gain him a temporary reputation; although he may succeed for a time, by practising upon the natural credulity of his fellows, yet the imposture will one day prove his ruin; for when the “rains descend, and the winds blow, and the floods come,” his baseless fabric “must fall, and great will be the fall theroco.”

I have said that Anatomy is truly and properly called a science. Napoleon styled medicine “the Uncertain Science,” and the title was not altogether misapplied, but no part of this uncertainty hangs about the branch of knowledge to which you will here direct your studies. Here are no fields for the display of a vigorous but unbridled imagination; no arena for the exercise of subtle and ingenious conjecture, no temptations for the play of fancy, or the dreams and visions of theory; but, on the other hand, here is full scope for the most unwearied in-

dustry, the most persevering research, and the most acute investigation. If we trace the history of Anatomy, step by step, we will find in its course all these marks by which the progress of true science is distinguished, a gradual developement of great truths, in proportion to the zeal with which truth has been pursued,—a steadfast advancement, whenever the legitimate path of observation and experiment has been adhered to, on the contrary, a stubborn inactivity, and an unyielding barrenness, when the proper means of investigating nature have been thrown aside, and any of the counterfeit schemes of empirics in science resorted to. The method of Induction, gentlemen, is older than Lord Bacon; all that Aristotle really knew of Physics, and all that was true in Galen's manifold treatises, were the results of its application; and now, as then, and in all coming time, whatever is discovered in Anatomy, as in all other sciences, is the result of laborious application and careful investigation. While we admit with the illustrious BELL, that "human anatomy is a part only of a more general science, which embraces the knowledge of the structure of all classes of animals, from the most simple to the highest," we must yet bear in mind that it is by far the most interesting and important part thereof. We not only claim for our favourite branch of knowledge a place among the Natural Sciences, but we call it, without fear, and I am sure without presumption, the noblest and most worthy of them all. Classify them upon what principle you will, the superiority of anatomy will still appear. What science, indeed, comes home with so much interest to our own minds as that which proposes to unveil the mechanism of our frames and explain the structure of those bodies which are the organs and instruments of our mental powers? The corporeal machine is the vehicle and agent of the immortal spirit, the engine by which it exercises its wonderful powers, works its high purposes, and accomplishes its mighty achievements; and surely that is a science worthy our strongest admiration and our most impulsive curiosity, which proposes to lay bare to our view the organization of this engine, and to unfold the wondrously contrived mechanism by which the intercourse of the mind of man with the external world, the agency of spirit upon matter, is so mysteriously carried on.

I could dwell more at length upon the interest and importance of anatomy, arising from its relations to general science, but as you are all directing your attention to the study of medicine, it is necessary that I should lay before you, more particularly, its bearing upon those branches of knowledge which will come immediately within the scope of your professional pursuits. And, first of all, I would repeat the declaration already made, that without a clear and thorough knowledge of the structure and relations of the human body, you can never expect fully to understand its functions; in other words, unless you are skilful anatomists, you can never become enlightened and scientific Physiologists. Physiology is the science of Life, viewed as an assemblage of all the functions which resist death. Every one of those functions has its appropriate organ in the human system, its peculiar apparatus, designed to serve its purposes, and framed with wise intent, by the great author of life, for the complete accomplishment of them. All the pheno-

mena of vitality, (whatever the hidden elements and powers of life may be) are dependent upon the physical instruments, which are the agents of their production, and upon the connections and arrangement of the various apparatus employed in the execution of the vital functions. How absurd, then, must the idea appear, of explaining the phenomena, without a thorough comprehension of the instruments; of theorizing about the functions, without understanding the organization! As well might you attempt to explain, minutely and clearly, the entire working of the steam engine, that almost living product of human ingenuity, without a knowledge of its component parts,—its boiler and condenser,—its valves and its levers,—its cylinders and pistons. I need not dwell longer upon a point so obvious; although the danger is the same now that existed nearly half a century ago, when John Bell wrote that “in spite of feeling and reason, the student will encourage in himself a taste for speculations and theories, the idle amusements of the day, which even in his own short course of study, he may observe sinking in quick succession into neglect and oblivion, never to revive; he will aspire to the character of a physiologist, to which, want of experience and a youthful fancy have assigned a rank and importance which it does not hold in the estimation of those who should best know its weakness and strength.” To the same purport is the language of Dr. Hunter, justly styled one of the first anatomists, if not the truest physiologist that the world has seen: “Physiology, as far as it is known or has been explained by Haller, and the best of the moderns, may be easily acquired by a student without a master, provided he is acquainted with philosophy and chemistry, and is an expert and ready anatomist; for with these qualifications, he can read any philosophical book and understand it as fast as he reads.” Do not understand me, gentlemen, as desiring to discourage the study of Physiology; it is one of the most interesting and fascinating branches of knowledge to which your attention can be directed in the course of your studies, and the only object of these remarks is to assure you, that in order to its successful pursuit, you must lay a broad and deep foundation of anatomical knowledge, without which your conceptions will always be obscure, and your acquirements in Physiology unsubstantial and unsatisfactory. A brief allusion to the incidental advantages of the study of Anatomy, in throwing light upon the functions, may be proper in this connection. In our attempts to obtain an acquaintance with the structure and connections of the different parts forming our bodies, we can hardly fail to obtain some idea of the functions they subserve. The student, even when most closely engaged in examining the bodily organization, imperceptibly becomes a physiologist, so that when he afterwards enters specially on the study of the functions, he soon acquires clear and precise ideas of the action of each part, of its relations to the whole system, and of the reciprocal influence of the parts and the whole. Cautious observation and study enable him to trace out the laws which make health and life dependent on the continued succession of certain actions, and if he understand well the minute anatomy of the system, his views increase in depth and comprehensiveness, and he looks upon his profession with a higher feeling of respect, and a fuller glow of hope for its improvement and utility.

But if the study of Anatomy be important in view of its applications to Physiology, it is doubly so in regard to Surgery, a far more useful, because an entirely practical branch of our profession. The object of Surgery is to obviate the effects of injuries done to the human body, whether produced by internal or external causes, this end is to be accomplished by replacing what has been broken or disjointed, whenever it is practicable; by uniting surfaces that may have been separated by violence; and by removing from the system what has become useless or hurtful. This simple statement and a moments reflection upon the subjects which it mentions as falling within the scope of surgery,—must be sufficient to convince you, that without an accurate knowledge of the structure and relations of the different parts of the body, those objects can never be properly and satisfactorily accomplished. Indeed, we may call Anatomy the theory, of which Surgery is the practice. As there are some men that profess to be artists, who work simply by the rules of art which other and wiser men have laid down, following, blindly and mechanically, the laws thus made for them, and ignorant of the theories which lie at their foundation, so there are men calling themselves surgeons, who will attempt the most important and hazardous operations, the issue of which must necessarily jeopard the life of the patient, without a knowledge of the organs and substances which they thus daringly and rashly attack. But as the mechanical artists of whom I have spoken can neither attain skill or reputation, so the Surgeon who is destitute of a thorough knowledge of Anatomy, must be content always to be a bungler and to be despised. His foolhardiness deserves a worse fate than mediocrity; he should be branded with contempt and sealed with infamy. The indispensable importance of a thorough practical acquaintance with this science, was earnestly impressed upon his students by Mr. John Hunter, the Father of British Surgery. It is said of him that when Dr. Physick was placed under his care as a private pupil, he led the young student into his dissecting room, and pointing to some dead bodies, said, "These are the books that the student will learn under my direction!"

And they are "books," gentlemen, which are not to be hastily examined, or briefly run over, but rather to be made the subjects of your daily scrutiny, and your nightly toil. It is not by slight and general views of anatomy that the surgeon can become accomplished in his noble science, but by a just and complete knowledge of all its branches, even the most delicate and difficult. Nothing less than this will prepare you for the practice of surgery in these days of the high advancement of the art. In former times, indeed, when surgery held no elevated rank, in relation to general science, the operative surgeon left to the Physicians the difficult and laborious work of examining and understanding the bodily organization; and the former were content to be the mere agents or assistants of the latter. But, in reading the history of medicine, you will find that this second-hand knowledge was inefficient; that the art was rude and cruel, compared with its present perfection; and that its practitioners held no higher rank than the knights of the razor, who performed, indeed, in many cases, the honorable and useful duties of the two-fold profession, of bar ber and surgeon. As Anatomy began to be cultivated, however, and the sur-

geon devoted more attention to it, the art began to rise in dignity and importance; and now, when every practitioner is supposed to be thoroughly informed in that science which contains the elements of his art, that art itself is second to no human employment in the excellence of its objects, the elevation of its character and the dignity of its reputation.

A very slight glance at the former condition of surgery, as contrasted with its present perfection and glory, will satisfy you of the truth of these remarks. Twenty-three hundred years ago, flourished **HIPPOCRATES**, the Father of Medical science, who, like Homer and Raphael, in their respective arts, not only created this science, but brought it to a high degree of perfection, by the impulsive force of his genius and the unwearyed energy of his research. So accurate were his experiments and so profound his observations, that he unfolded the history of acute diseases with so much clearness and precision, that twenty centuries have hardly detracted from the value, or added to the amount of his researches. But he was far from attaining the same degree of perfection in **Surgery**. And why? Because the circumstances with which he was surrounded,—the prejudices of an ignorant and superstitious people, and their religious veneration for the asylums of the departed,—by depriving him of the opportunity of dissecting the human body, raised up insurmountable obstacles to the proper study of **Anatomy**; and his knowledge of the subject founded chiefly upon the external appearance of the body, and on the examination of the structure of those animals which were supposed to approach nearest to man, was necessarily limited and imperfect. In the study of acute diseases, commonly occurring, which presented strongly marked symptoms, and only required a just and sagacious observation of their succession and relations to each other, in order to the formation of a correct history of them, these imperfect notions were sufficient; but in **Surgery**, the want of **Anatomy** was immediately felt, and the consequence was that the science, even in the hands of so great a master, made little or no improvement. And it remained in its infancy, for nineteen hundred years longer, until, in the beginning of the 16th century, the genius and boldness of **Vesalius** gave new life to **Anatomy**. The darkness that had so long hung over **Surgery** was soon pierced by the new and brilliant light which the advancement of **Anatomy** diffused over all branches of medicine, and under the illuminating power of this clear and certain flame, the art soon assumed a new aspect, and suddenly rose to a high pitch of perfection, in the hands of **Ambrose Paré**, the distinguished **Surgeon of Charles IX**, whose great and well deserved reputation saved his life, in the memorable night of the massacre of St. Bartholomew. To this day, the countrymen of **Paré** claim for him the same high place among surgeons, that is assigned to **Hippocrates** among physicians. And among all the great names that adorn the history of **Surgery** in later times, the **Petits**, the **Desaults**, the **Le Drans**, the **Munros**, the **Hunters**, the **Coopers** and the **Physicks**,—you will not find one, the foundation of whose high renown was not deeply laid in the study of **Anatomy**; here they prepared themselves for those successful operations which made them the admiration and wonder of their own times, and for those

brilliant discoveries and inventions which have transmitted their glory undiminished to ours—nay, which shall crown every one of these honored names with the immortal reward of an imperishable fame.

There is no quality more indispensable to the surgeon than that undisturbed coolness of mind which cannot exist without a strong and just confidence in his own powers, and in his preparation for the arduous task before him, when he is called upon to perform some important operation. This just self confidence is essential to every pursuit in life. To quote the language of Bulwer, “if you rob Genius of its confidence, you clip the wings of the eagle.” No great enterprise in the walks of science, literature, art or business, has ever been accomplished without it; it nerves the arm of the warrior, it gives energy and power to the decisions of the statesman, and it enables the scholar to struggle on, through years of unceasing labor, with full hope of the final reward of all his toils. But to the surgeon, of all other men, is this calm confidence and self reliance indispensable. He is called to the side of a wounded man,—life is fast ebbing away,—his judgment must be almost as rapid as his eyesight, and his action must follow, as rapidly, the decisions of his judgment, or the patient will die in his hands. Now, under such circumstances, a man must either be thoroughly ignorant of anatomy, or fully learned in it, in order to have confidence in himself. I can imagine the former confidence, that of the quack, who knows nothing of the wonderful mechanism of the human frame, and of course is ignorant of the dangers that lie before him, to be as strong as that of the skilful anatomist, who comes to his task, not only fully aware of all the dangers that attend it, but also furnished with the knowledge necessary to avoid or obviate them; but surely, gentlemen, it is not requisite to warn you against the ignorant, reckless foolhardiness of the one, while I hold up to you, as the object which you should aim at and pursue with unwavering perseverance, the well grounded self-reliance of the other. Nor, after the remarks that have been made, is it hardly necessary to say to you, that the surgeon who is possessed of only an outline knowledge of anatomy, will have no pretensions to the just confidence in himself, which the thoroughly furnished operator can indulge, while, on the other hand, his knowledge of the structure and constituents of the body will be sufficient to make him tremblingly alive to every danger, and to fill his mind with the most harassing apprehensions. Most sincerely is such a man to be pitied for his miserable condition, but most heartily is he to be despised for the inexcusable carelessness and indolence that have brought him into it. Behold him, standing over his patient faltering, hesitating, disconcerted: hardly knowing where to apply his knife, and certainly ignorant of the results of its application—in the language of John Bell,—“trembling at the thought of what he has to do,—acting only as he has seen others act, he is interrupted, startled, perplexed with every new occurrence. He has foreseen nothing, provided for no accident, and every accident alarms him. He moves fearfully and timorously onward; like a blind man who walks with an air of confidence on an accustomed road, but when any new object presents itself, or the road is changed, is bewildered and lost.”

"Such operations are seen agitated, miserable, trembling, hesitating in the midst of difficulties, turning round to their friends for that support which should come from within, feeling in the wound for things which they do not understand, holding consultations amidst the eries of the patient, or even retiring to consult about his ease while he lies bleeding in great pain and awful expectation; and thus, while they are making ungenerous struggles to gain a false reputation, they are incurring reproaches which attend them through life."

What a picture is here! Nor is it overcharged, gentlemen, as you may have learned already from observation,—I hope you never may, from experience. Let it sink into your hearts, and be thoroughly impressed upon your memories, and it will effectually prevent your placing yourselves in such a false and unhappy position. As you would not dare to risk your own life in the hands of any surgeon, whom you thought not thoroughly skilled in anatomy,—so may you never rashly undertake to trifle with the lives of your fellow men, by undertaking to perform dangerous operations upon them, without this indispensable preparation. Every man who loses a patient under such circumstances and for such reasons, is morally responsible for the life of his victim,—for *victim* he is, to the stupidity, the idleness, or the carelessness of the man to whom he entrusted his life. May you never incur so fearful a responsibility! Now more fearful than ever, because the means of improvement in Anatomical knowledge are placed within your reach, and nothing but patient perseverance and industry, are necessary on your part, in order to secure it.

The use of anatomical knowledge to the Pathologist must be obvious to you, from the single consideration that without an acquaintance with the form, size, situation and relative position of the different organs in a healthy state, it would be utterly impossible to determine correctly, the mutations which have been effected by disease, whieh alter the color, shape and relations of the parts as well as their structure. A wonderful impulse was given to Pathology, in the 18th century, by the celebrated Haller, whose various discoveries in Anatomy and Physiology, extended their influence into every department of medicine; and the new description of the laws of the muscular and nervous systems given by him with such remarkable accuracy, tended greatly to clear away the rubbish of the various visionary and conflicting theories of the elder pathologists, and to prepare the path for the modern investigations, whieh, pursued in the true spirit of the Baconian philosophy, have given greater clearness and method, if we may not say entire consistency and truth, to this branch of medical science. A close investigation of the causes of disease, as exhibited by alterations in the strueture of the organs, was a direct consequence of the anatomical discoveries of the period just referred to; and from that time to the present, all just Pathology has been founded upon the revelations of morbid anatomy, taken in connection with the physiological doctrines of Life, and the relations of external agents to its various functions. Vastly, however, as the modern Chemistry and Physiology have contributed to the advancement of pathological science, we are perfectly safe in the assertion that its true and sure basis is Anatomy.

It remains now, gentlemen, to state briefly the importance of this science to Medical Practice. What has been said in regard to Pathology, has very close reference to this branch of the subject, for there is nothing more certain than that Therapeutics, which investigates the operation of remedies as employed either to obviate or to remove disease, must depend very much, if not entirely, upon the theories of Pathology that we adopt; for according to our notions of the nature and causes of disease, must be our opinions in regard to the means necessary for its removal, and their mode of application. But it is important that I should point out to you the absolute necessity of clear and correct anatomical knowledge, in order to the formation of a true diagnosis, in actual practice. To ascertain the existence of disease in any organ, its situation and relations must be well understood, or otherwise when symptoms occur, indicative of derangement in a region where several organs are placed, they might readily be referred to a viscous having no connection with the phenomena thus developed. For example, in examining a patient who complains of pain in the right hypocondriac region, the situation, relations and functions of all the different viscera there placed must be accurately known, for the pain may be occasioned by a morbid state of either of them. The importance of such information will be appreciated, when you remember that in this region are found, the liver, gall-bladder, biliary ducts, pylorus, part of the duodenum, colon and pancreas, disease of any one of which might give rise to the symptoms alluded to. I cannot, therefore, urge upon you too strongly, the necessity of giving your attention to the study of anatomy proper, now, while the means of obtaining this essential knowledge are placed within your reach.

But your attention should also be carefully directed to the necessity of examining the dead, for the purpose of ascertaining the seat and the effects of disease. It is very true that a great proportion of your practical skill in detecting the character of disease is to be obtained by patient investigation at the bed-side of the sick; but it is equally true, that without much time and labor bestowed on cadaveric inspection, you can never have that quick perception of the nature of internal maladies, that ready apprehension of the immediate seat of the disease, and that almost intuitive perception of the hidden workings of the morbid agency in the system, which ought to be exhibited by every practitioner of medicine. The best verbal descriptions convey but feeble and inadequate ideas upon these subjects, and he who trusts to them, and refuses to store his mind with the results of accurate observation obtained in post mortem examinations, will always find his views of disease unsatisfactory to himself and his consequent practice doubtful and uncertain. And your desire to witness and take part in cadaveric inspections, should not be confined to those cases in which death has been the result of rare and singular diseases, but should be extended to those which may be regarded as even of ordinary occurrence. To quote the appropriate language of M. Hodgkin, "it is only by this practice that the student can learn to distinguish the almost endless varieties of aspect which parts and organs assume, and to avoid confounding three things essentially distinct,—healthy, diseased, and

cadaveric appearances ; and to him who is engaged in practice, it is no less necessary, in order to keep up his knowledge, and to rectify, confirm, and improve his diagnosis."

In no part of medical practice, should we be reduced more entirely to experimental empiricism, if deprived of anatomy, than in midwifery. Without the light of Anatomy to direct his steps, the efforts of the Obstetrician would be almost useless, if not absolutely hurtful, in that momentous period in the life of the female, when his assistance, if judiciously rendered, is attended with life and safety, but if improperly applied, is fraught with mutilation and death, to the suffering mother and the tender offspring.

The want of anatomical knowledge is seldom more keenly felt by the practising physician, than when, either for judicial purposes, or to satisfy a natural and laudable curiosity in remarkable cases of disease, he is called upon to make a post-mortem examination. Why is it that so many of these reported examinations are vague, cloudy and unsatisfactory, but that the operators were ignorant of morbid anatomy? How often are we called upon to blush for our profession when such reports are published to the world, so entirely destitute of so much as the form of scientific investigation, that even the laity laugh to scorn the imbecile ignorance and stupidity which they exhibit! This I do assure you, gentlemen, is no surcharged picture, for if you have ever witnessed, in a court of justice, the examination of physicians in a case where accident or violence has caused mutilation or death, you have had direct evidence of the utility of correct anatomical information. The practitioner who has, during his pupilage, availed himself of the opportunities afforded him, and carefully and perseveringly devoted his time and talents to the acquisition of anatomical knowledge, answers at once, correctly and without hesitation or doubt, the questions propounded to him ; while on the other hand, the man who has neglected the opportunities and wasted the time which he ought to have devoted to this subject, answers evasively, ignorantly and doubtfully, thus manifesting his own deficiencies, incurring the ridicule and contempt of the bystanders, and disgracing the honorable profession which he pretends to practice. May your zeal and industry prevent *you* from ever having your names enrolled upon this catalogue of dunces, this list of despicable hangers on to the skirts of our noble calling.

I have thus attempted to exhibit, very briefly, the importance of Anatomy as a Science, as well as its relations to Physiology, Surgery, Pathology, Practice and Midwifery. With a brief statement of the manner in which the subject will be treated, during the ensuing course of instruction, and an exhortation to diligence and zeal in its study, I shall conclude this address.

To the members of the class, I will say, you will be expected to acquire most of your knowledge here obtained, from actual dissections made with your own hands. This is the *only* way in which you can become expert practical Anatomists ; you may listen to lecture after lecture, you may read volume after volume, but if you do not unite with your hearing and reading, actual dissections of your own, your acqui-

sitions will be neither accurate, solid or permanent. Accordingly, our rooms here are "dissecting rooms" rather than "lecture rooms." A school in which you can study for yourselves, as well as be instructed by another: the dead subject, in addition to the voice of the living instructor, is to reveal to you the secrets of Anatomy. To facilitate your labors and assist me in the discharge of the duties of these rooms, I have engaged the services of J. M. ALLEN, M. D. a gentleman well known to many of you as a thorough Anatomist: it will be our proper duty to afford you every facility in the prosecution of your experimental inquiries, to direct you in the course of your dissections, to aid you in every case of difficulty, and in short, by presenting the proper method of dissection, and the objects to which your careful study must be directed, to save you in every possible way, from expending, uselessly or unnecessarily, your time and your labor. It will be our duty also, in all cases, where the subject under dissection has been the victim of disease, to point out, as far as practicable, the nature of the malady, and the changes which it has wrought in the form, color, or relations of the organs, thus facilitating your study of morbid anatomy. The entire subject will be demonstrated from the beginning to the end, as far as it is within the reach of our power, by actual dissections. In addition to this, a regular Course of Lectures on three evenings in the week, during the season, will give, I trust, additional light and interest to the subject, embracing, as they will, the range of Systematic Anatomy, as well as every interesting point of Pathology, Surgery, or any collateral subjects that it may be thought will elucidate the demonstration. With a full knowledge of the weight and difficulty of the task before us, we bring to its performance, a firm determination that no efforts of ours shall be wanting that can diminish your toils, assist your studies, and encourage your purposes, and a steadfast assurance that you will second those efforts with hearty good will and untiring perseverance.

Although it may be hardly necessary, suffer me, in conclusion, to urge upon you the importance of devoting yourselves now to the study of Anatomy. The first inducement, that I would offer, is founded upon the remark made in the beginning, that Anatomy is truly *a Science*. You may have the satisfaction of knowing at every step of your progress, that you are acquiring real and substantial knowledge, and not merely filling your minds with empty theories and vague hypothesis; that you are acquiring an acquaintance with the noblest material work of God, the human body, at once the abode and the instrument of the immortal spirit; in a word, that you are laying up for yourselves an inexhaustable treasure of intellectual wealth, which no chances can affect, no misfortunes diminish, no canker destroy. I would call up, as a second reason for zeal and devotion to this noble science, its tendency to enlarge and strengthen your powers of intellect. There is no profession in which the highest qualities of mind,—clearness of judgment,—rapidity of thought,—and promptness of decision,—are more strongly and frequently called for, than in that to which you are looking forward: for you will often be required, in the course of medical practice, to examine the case, to compare its symptoms, to reason upon their

causes and indications, and to decide upon the proper course to be pursued, and all this with a promptness that will leave no time to make up for past inattention, or to acquire knowledge that must be used on the instant. The study of Anatomy will not only give you possession of most of the elements of the various problems that you will have to solve, by unfolding to you the structure and organization of the body, but it will cultivate and sharpen to a very high degree, the intellectual qualities to which reference has been made. A third and noble inducement to this study, may be found in its effects upon your moral powers. No part of the creation affords more complete and satisfactory evidence of design than the human body; and if you are at all desirous of recognizing the great Author of nature in his works, you can derive from this source as many and as clear arguments for the existence, wisdom, and power of the Deity, as from all the works of nature beside. In all sincerity do I urge upon you the value of a moral reference, in your studies, as well as in your actions; and in all honesty do I assure you, that if you can study the Anatomy of the Human body without being struck with its wonderful mechanism as exhibiting the Intelligence and benevolence of the Omnipotent designer, it will redound as little to the credit of your intellectual powers as of your moral feelings. And while you zealously seek after the high honors of science, may you discern the vanity of the loftiest aims and the grandest achievements, when unsanctified by virtue and undirected by the love of truth.

Another inducement to persevering industry in your present studies is to be found in the fact, that if you do not acquire a knowledge of Anatomy now, the chances are considerably against your ever gaining it hereafter. When you are involved in all the cares, anxieties and labors of professional life, you will have little time to devote to this elementary branch of knowledge, and, moreover, the opportunities of gaining it will rarely be within your reach. Bitter, then, and the more bitter because unavailing, will be your regret that you did not employ the days of youthful study as they should have been employed; sadly will you remember the precious hours wasted in folly, and the golden opportunities suffered to escape unimproved; miserable will be the goading reflection that you are unworthy of your profession, and made so by your own inconsiderate negligence. But better things are hoped of you, gentlemen. That noble profession whose high duty it is to save the lives of men,—to stand by them in the hour of sickness and languishing, that hour that “breaks down the pride of man,”—to defer the day of widowhood and to put back the bitterness of orphanage,—to turn away Death from the threshold of Poverty,—or to soothe and soften the last hours of failing humanity,—calls upon you to devote yourselves, with manly resolution, to arduous toil, to unremitting labor, to ceaseless diligence, in order that you may be worthy of its elevated honors. If you would live a life of ease, indolence and pleasure, you have mistaken your way; such is not the life of the Physician who is deserving of the name. Unless you have nerv'd yourselves up to the firm determination to study, to investigate, to labor, now, in the vestibule of the great Temple of Science, it is our duty to stand in the

portal and forbid your entrance. Within that Temple is the Sanctuary of Honor, not to be trodden by the foot of Indolence,—not to be polluted by the entrance of ignorance;—nay, that sacred, inmost Shrine, on which the wise, and the learned, and the mighty, of all lands, have gloried to place their offerings, is not even to be gazed upon by the eye that has not scanned the book of nature and beheld her mysteries unveiled. To speak without a figure, the honors and rewards of our profession are only to be secured by him who shall deserve them by his labors and his perseverance; and while they will be the sure reward of even moderate abilities, devotedly and perseveringly applied, they will not, cannot be obtained by the loftiest genius; without patient industry. The field before you is vast, its labors are abundant, but its harvest will be rich and ample; the compensation will be more than sufficient for all the privations you may suffer, all the sacrifices of ease and pleasure you may make, all the severity of toil you may undergo; for it will be no less distinguished rewards than the esteem and approbation of your fellow-men,—the sure, unfailing testimony of a good conscience,—and the approval and smile of Heaven. I cannot better close my remarks, than in the language of one of our own poets,* who has incorporated the first maxim of the Father of Medicine, into one of the most remarkable poems of the times.

“ Art is long, and Time is fleeting,
 And our hearts, though stout and brave,
 Still like muffled drums are beating
 Funeral marches to the grave.

Let us then be up and doing,
 With a heart for any fate,
 Still achieving, still pursuing,
 Learn to labor, and to wait.”

* Longfellow.